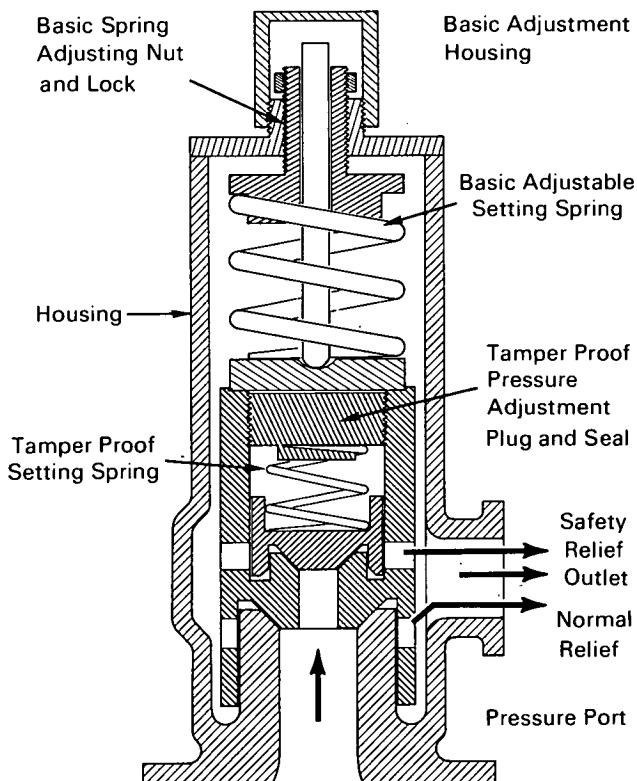


NASA TECH BRIEF



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Inexpensive Tamper Proof Safety Relief Valve



The tamper proof safety relief valve is a basic relief valve with an added safety relief valve capability. Mechanical damage to equipment, or damage caused by environmental conditions, particularly in the field, is quite common, and in the event of the failure of basic relief valves, the safety relief valve will continue to function. It may be installed in inaccessible areas with

a high degree of reliability, and should prove useful in boiler configurations, hydraulic devices, and chemical processing and pneumatic systems.

The basic components of this device include a relief valve and the tamper proof safety relief element, as shown in the figure. The valve can be made of stainless steel or other noncorrosive metal, ferrous and non-ferrous metals, plastics, synthetics or any combination of these materials, and can be adapted to the user's specific application. The system is protected from over pressure in all cases, e.g., if the basic relief valve used in a 100-psi system is set to open at a cracking pressure of 110 psi and the system pressure should exceed 125 psi, the safety relief valve would open to relieve the over pressure before a failure occurred.

The basic component relief valve may be adjusted by removing the seal wire and adjusting the tension on the main spring. The tamper proof element, however, cannot be adjusted without a major disassembly.

This item should be of special interest in applications where backup protection is required to assure safety for the functioning of valve system components.

Note:

No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer

Kennedy Space Center

Code AD-PAT

Kennedy Space Center, Florida 32899

Reference: B70-10320

(continued overleaf)

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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